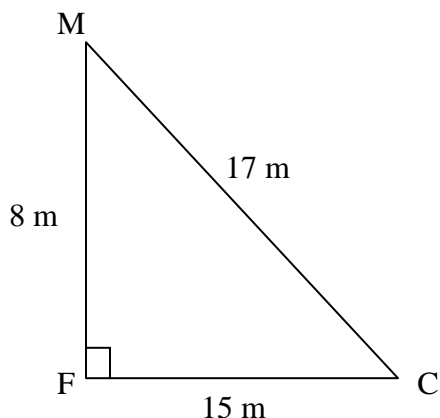


Trig Unit Test - Practice

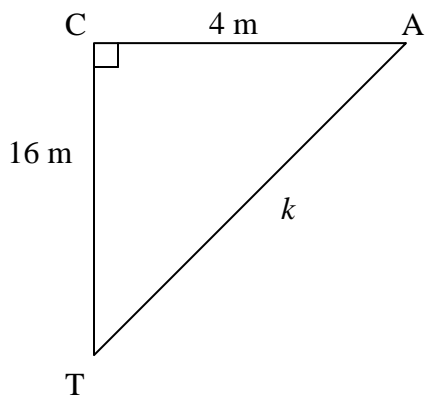
Expectation	Level Achieved
C1 - solve problems involving trigonometry in acute triangles using the sine law and the cosine law, including problems arising from real-world applications;	
C2 - demonstrate an understanding of periodic relationships and the sine function, and make connections between the numeric, graphical, and algebraic representations of sine functions;	

Expectation C1

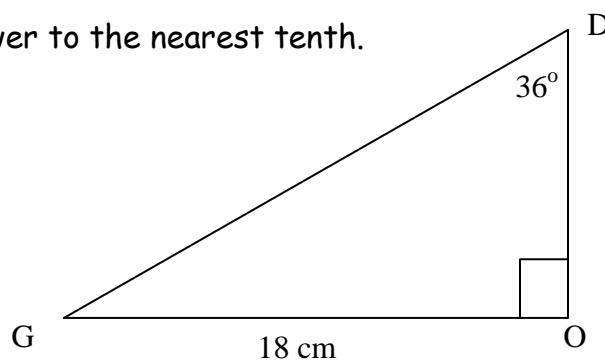
1. State the three primary trigonometric ratios of angle M.



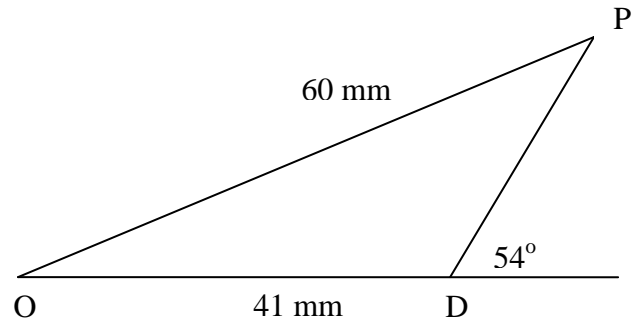
2. In the following triangle, find the length of the unknown side and angles.



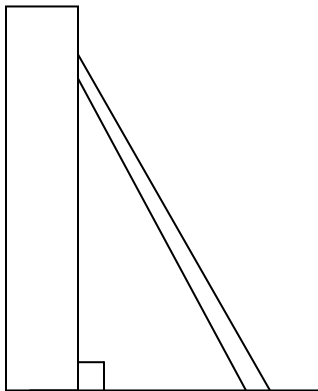
3. Find the length of side g . Round your answer to the nearest tenth.



4. Determine the measures of all unknown angles in the following triangle, to the nearest unit.

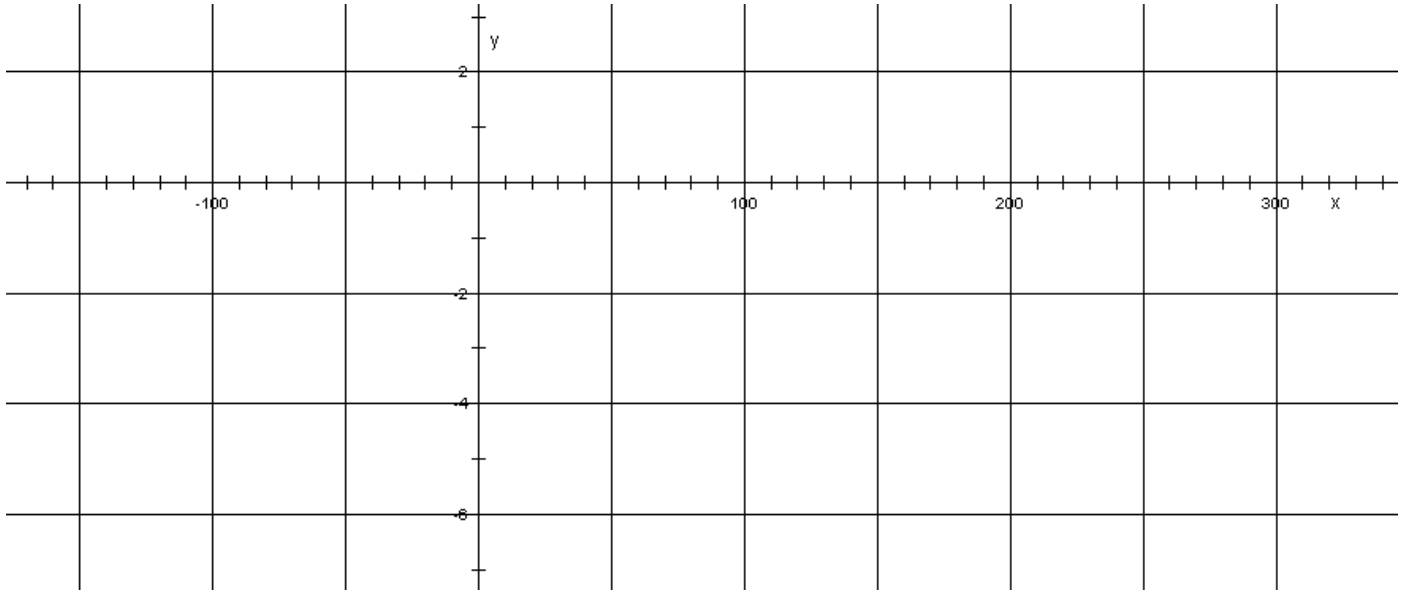


5. According to a safety code, the angle a ladder makes with the ground should be between 60° and 70° . A ladder 9.5 m long is leaning against a building. If its foot is 4.7 m from the wall, is it safe to climb the ladder? Label the diagram and *round your answer to the nearest unit*.



6. Two buildings are 12 m apart. When Kirin is on the top of the shorter building (10m tall), and looks at the base of the second building, she notices that the angle of depression is 60° . When she looks at the top of the second building, the angle of elevation is only 45° . What is the height (in meters) of the second building?
Round your answer to the nearest tenth of a metre.

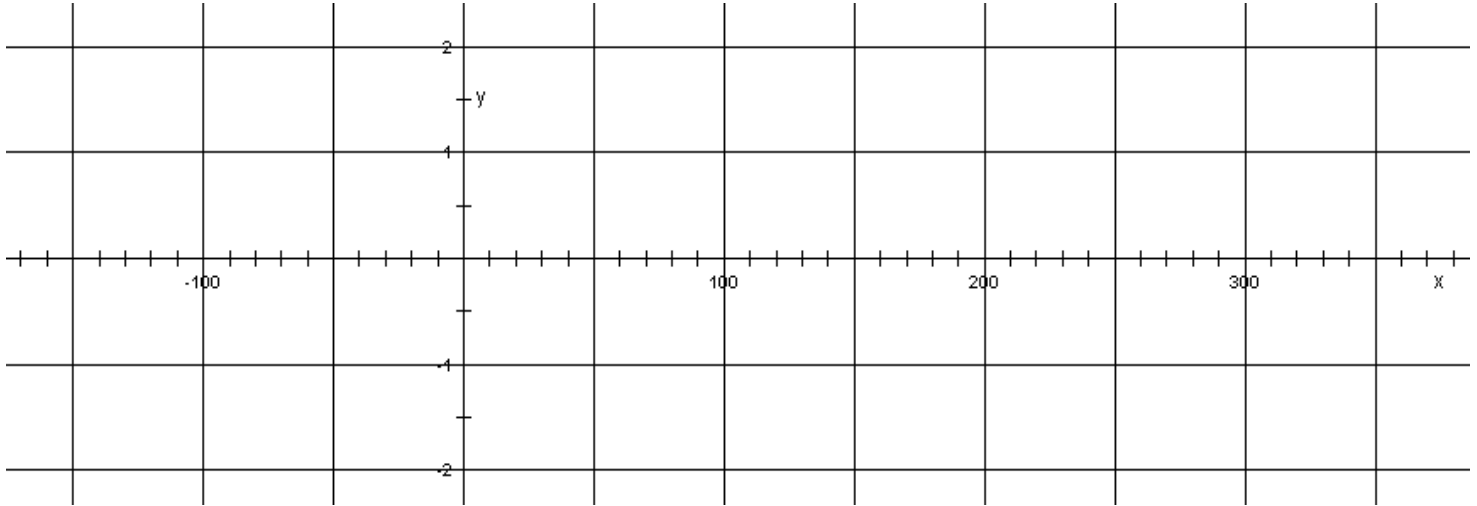
7. Jim has a triangular backyard with side lengths of 29 m, 21 m & 17 m. His bag of fertilizer covers 600 m^2 . Does he have enough fertilizer?

Expectation C28. Graph $f(x) = 2\sin(x + 60^\circ) - 3$ 

State the key features of the above graph

Amplitude	
Period	
Maximum	
Minimum	
Equation of Axis	
Domain	
Range	
Interval of increase	

9. Graph $g(x) = \sin(x - 60^\circ) - 1$



10. Explain what "real" world situation could be represented by the function. Be sure to discuss all key features.

$$f(x) = \sin(x + 90) + 5$$